

## **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Currently Amended) A method for the investigation of patterns in collections of peak-containing data strings or lists of peaks, the method comprising the following steps:
  - (a) displaying the data of the collections of the peak-containing data strings or peak lists in graphical form,
  - (b) calculating significant patterns, correlations or classifications within one or between different collections of the peak-containing data strings or the peak lists by pattern recognition algorithms, thereby including a determination of ~~the~~ peaks significantly participating in the ~~pattern generation~~ calculation of the significant patterns, correlations or classifications, and
  - (c) highlighting, in the graphical display of the peak-containing data strings or the peak lists, the peaks significantly participating in the ~~pattern-generation~~ calculation of the significant patterns, correlations or classifications.
2. (Currently Amended) A method according to Claim 1 wherein the peak-containing data strings are displayed, in step (a), by a density plot.
3. (Original) A method according to Claim 1 wherein features of the graphical display are interactively accessible.
4. (Currently Amended) A method according to Claim 3 wherein an ensemble of start peaks for the pattern recognition ~~programs can be~~ algorithms is selected from the graphical display.

- 1 5. (Currently Amended) A method according to Claim 3 wherein peaks to be  
2 compulsory included in the result list of significant peaks by pattern recognition  
3 programs can be are selected on the display before the pattern recognition  
4 programs algorithms are started and the selected peaks are highlighted in the  
5 graphical display together with the peaks which significantly participate in the  
6 calculation of significant patterns, correlations or classifications.
- 1 6. (Currently Amended) A method according to Claim 3 wherein, after pattern  
2 recognition by the pattern recognition algorithms is completed, by selecting a  
3 peak on the graphical display[[,]] is selected in order to show more information-is  
4 shown with respect to the peak's participation in the pattern generation  
5 calculation of the significant patterns, correlations or classifications.
- 1 7. (Currently Amended) A method according to Claim 1 wherein the intensity values  
2 of the peak-containing data strings are transformed by a filter before the pattern  
3 recognition algorithm is applied.